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### IMPACT OF TAMER'S TRANSPORTATION MEANS ON LOGISTICS COSTS: A COMPARATIVE STUDY WITHIN THE PHARMACEUTICAL INDUSTRY IN THE KINGDOM OF SAUDI ARABIA

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#### **ABSTRACT**

The study aimed to compare previous and current transportation means with respect to logistical costs at Tamer Group which was leading distribution company within the pharmaceutical industry in Kingdom Saudi Arabia with respect to overall impact on logistics costs. The study had used qualitative and quantitative approaches used secondary data. The interviews were conducted to extract the comparisons which were reasons of the change. Numerical data and excel sheets that represented the price lists for both years were retrieved to construct the formula to compare overall costs embedded. There were factors contributed in need for changes in road transportation means in year 2014 and 2015 which lead to remarkable reduction in logistics costs correlated with increases in performance by 68.33%. External and internal factors for changes in transportation means such as nature of the products availability, constant updates in SFDA and customs' regulation, truck types, KPI adjustment, merge of product delivery and truck contractors.

#### **INTRODUCTION**

There is a continuous emphasis on few operational concepts in the contemporary understating of businesses' supply chains and logistics excellence. This emphasis is turned into a competitive advantage that is shared among all industries around the globe, since logistics performance management can dramatically affect businesses' profitability. On the other hand, the kingdom of Saudi Arabia is noticing in the past two decades a rapid

economic growth, especially in the pharmaceutical industry. An in-focus report that was published by NCB bank in January 2011 estimated the market size to have reached-SAR10.29 billion (USD2.74 billion) in 2008, with expectations to present a compound annual growth rate of 5.74% and is estimated to reach SAR13.1 billion (US\$3.49billion) by 2012.

A key factor success for any business is ensuring efficient supply chain management (SCM) and ensuring a competent logistics services guarantees efficient SCM. SCM is the planning, control, arrangement and realization of product flow from design and purchase through production and distributing to end customer [1]. The supply chain management involved supply and demand control inside company and between different companies [2]. This has become a vital operational strategy for improving organizational competitiveness and responding adaptiveness to change market condition [3]. In past few years, companies had implemented supply chain management to make decision in higher levels of strategy related to whole organization includes product development, customer communication, product, sale and preparation [4]. Logistics is one element of SCM and its functional efficiency which affected company successful [5]. Logistics have involved inbound, outbound, internal and external movements and material return for environmental purposes [6].

In additions, logistics no longer solely implemented handling or transportation but were also included a series of activities such as communication, customer service, reverse logistics, site localization and planning which correlated to trade and production [7]. Besides, logistics also play a main role in protecting the quality and conditions of products through proper transportation, storage and handling within the supply chain until final destination [8]. SCM required a system approach to view the supply chain as single entity compared a set of individual firms which each firm had own function [9]. The supply chain management is reflected in expenditures with organizations budget on average more than 70% of their revenues on related activities [10]. Meanwhile, transportation is the heart of logistics which money, information, and the product are being moved from one point to another.

Tamer Group is a leading company specialized in health care sector in KSA, the GCC countries, Middle Eastern regions, and North Africa. There is mainly a service-based company that focuses on importing, distributing, promoting, marketing and manufacturing pharmaceuticals. The Group's reach covers all private pharmacies, private hospitals, government hospitals, and other healthcare institutions in the Kingdom. Hence, logistics is considered a wheeled engine or key factor, as mentioned in Tamer's official website due to its direct effect on its efficiency, productivity levels and costs minimization in the business as a whole. More advancement the globe is witnessing on trade cargo in the pharmaceutical industry, more the need of logistics specialists and excellent specific transportation survives are emerging. Thus, there is important to understand such logistical practices in one of the most boosting industries in the Kingdom, noticing the development of two approaches taken on transportations means on Tamer's logistics to be able to cope up the growth of demand. The study aimed to compare previous and current transportation

means with respect to logistical costs at Tamer Group which was leading distribution company within the pharmaceutical industry in Kingdom Saudi Arabia with respect to overall impact on logistics costs.

**METHODOLOGY**

The purpose of this study is to compare two means of transportation and results. This study had involved qualitative and descriptive quantitative approaches used secondary data. Secondary data was used to diagnose some transportation quarterly reports and excel sheets which retrieved from Tamer Group for comprehensive comparison.

Tamer Group was selected for this since this company was a leading distribution company within the pharmaceutical industry in Kingdom of Saudi Arabia. The study focus was logistical approaches which road transportation means used for Tamer’s tenders in year 2014 and 2015 at main warehouse that located in Jeddah industrial city. Permission had been obtained permission from Tamer Group’s higher authorities to retrieve the data and gain access in legitimate manner. The sample was concerned to determine the result with respect to the logistical costs embedded in both means.

There were several interview sessions with Tamer’s managers which numerical data and reports. Meanwhile, data collecting instrument was number of excel sheets presented performance in year 2015 and 2015 of tenders’ transportation activities around branches with respect to the cost. Those sheets declared the price lists per truck for each trip in both years, trip number with rejected items, urgent trip numbers and extra day numbers spent for each trip.

In Table 1, Tamer’s experts who revealed the critical and available reasons behind the change as core elements of the theoretical comparison. There were 5 elements included two external reasons and three internal reasons. The external reasons were product nature availability and updates in SFDA and custom’s regulations. Meanwhile, internal reason was truck types, KPI adjustment and merge of products delivery. The results of the interview were portrayed as a summary listing all the important facts provided by the manager.

The results of the excel reports and sheets were computed on another excel sheet. The delta is calculated by finding the number of trips for branch multiplied by (the rate of costs in 2015 minus the rate of costs in 2014). The sum of all the branches is calculated to provide final overall cost embedded and observed increment or decrement with the new transportation mean.

**Table 1:** Correlation Between Study Questions, Data Collection Instrument and Data Analysis Tool

Study question	Data collection instrument	Data analysis tool
RQ1- What are the approaches	An interview with Tamer’s Logistics managers, to understand the current and	Summary sheet, that

implemented in 2014 and 2015 on Tamer's transportations?	the previous approaches.	summarizes all the important facts,
RQ2- What were the results, in terms of overall logistical costs?	Excel sheets that present the tenders' transportation activities around the kingdom branches, price lists per truck for each trip in both years, the number of trips with rejected items, the number of urgent trips and the number of extra days spent for each trip in both years.	Excel software, using formulas and figures.

## RESULT AND DISCUSSION

### Result

The study found that the core difference between the two means lied in internal and external factors behind the changes. Table 2 showed the summary sheet of the interview questions which gives a quick view on the difference between two transportation means and effects of change in costs embedded.

**Table 2:** Summary of Interview Conducted with Tamer's Managers

Interview questions	Summary
Why Tamer Group logistics' team changed their transportation mean	Increment in transportation cost in 2013 and 2014 due to massive continues. Better cope up the customs and SFDA regulations' updates. There was increased in reverse logistics "rejected items"
Could interviewee describe road transportation means used by Tamer in 2014	KPI establishment for past year at all branches and pushed the service to be more responsive. Meanwhile, different truck contractors had covered the service at high level and lack of customers' profiling.
Could interviewee describe road transportation means used by Tamer in 2015	KPI adjustments lead better integration between branches in transfers. The availability facilitated idea of planning for documentations for dispatching and renegotiations with truck contractors.
Which manner the change between two means affected cost embedded	Directly in new rented truck were different kind and customer profiling. Meanwhile, indirectly which availability in 2015 facilitated ability for better plan to meet customer deadline. Besides, reduced amount of rejected items which resulted in reduction of trips.
In interviewee own opinion, do interviewee believed the changes made and costs embedded were reasonable toward efforts put in	Yes, and not necessarily.

made the change	
In interviewee own opinion, do interviewee think new transportation mean was last for not less than a year	Probably and not necessary for two major reasons. first reason was continuous change in terms and regulations of the customs, SFDA and tenders' contracts/ delivery conditions. The second reason was market's nature which tends to be more responsive.

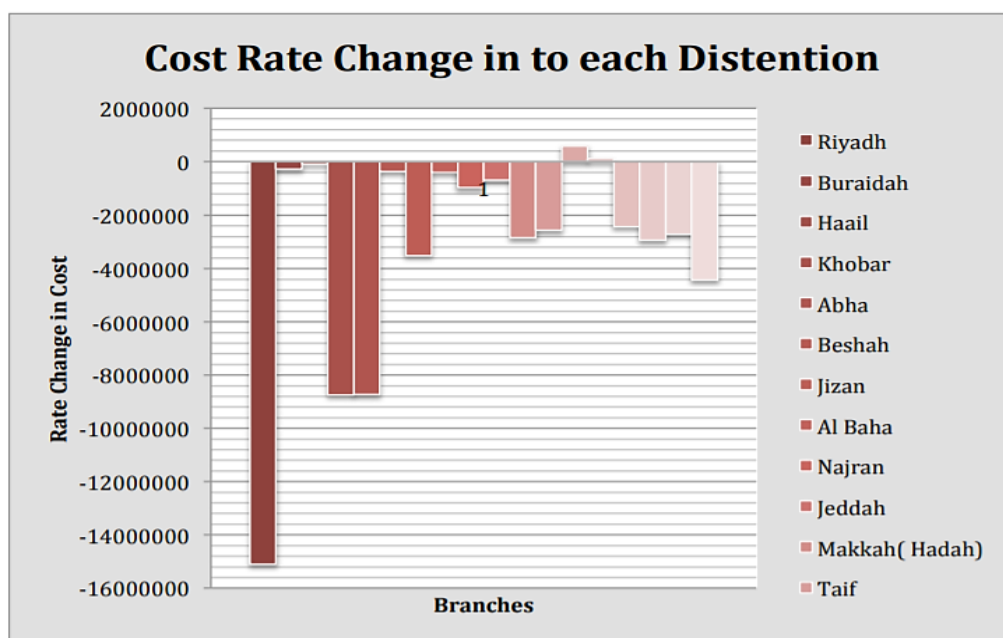
Tamer's tenders were their special clients in the governmental sectors around the Kingdom such as governmental institutes, ministries, bodies, and hospitals. Governmental sectors were considered the tenders due to mainly three reasons such as high level of sales in Tamer Group since the governmental sectors were the main source of health services and products for the society, hence, a massive level of purchases was required. In fact, governmental sectors in the Kingdom had a special and complex way in managing the regulations, signing contracts or agreement with the suppliers and handling/making their financial payments. The third reason was aligned with the contributions of these authoritative bodies had influenced the industry itself in several ways. Therefore, tenders' transportation plays an integral role in handling the logistics costs at Tamer Group.

The road transportation means in 2014 caused a massive enlargement in logistics costs because of the expansion Tamer Group has witnessed in the predecessors three years. The kingdom had witnessed health-scare conditions in the years 2010, 2012 and 2013 with several serious cases such as Corona and H2M1 which pushed Tamer group as first-hand suppliers to perform in a forcible manner as a responsive service. The company internally was establishing several ISO certificates that needed to systemize the work performance for the sake of records and documentations of the service level to meet the ISO standards. KPI was established to meet the standards in which the Tamer warehouses around the Kingdom were required to meet the service by 90 % in terms of responsive to delivery in order to have successful records where for example dispatching will only take 48 hours Accordingly the company was enclosed in additional critical risks because such transports need additional care from production until the consumption point. Furthermore, the enlargement of the industry affected the actions of the SFDA establishment of rules and regulations. The SFDA continued, similarly in the three years, established, changed and modified its regulations irregularly over short periods of time in an un-systemized and less collaborative manner. This the company ended up shipping almost only three pallets or even one, to meet the KPI standards, to satisfy the urgency of demand and to avoid penalties, yet due to the ever changing in SFDA regulations a lot of deliveries were delayed sometimes and rejected by customers.

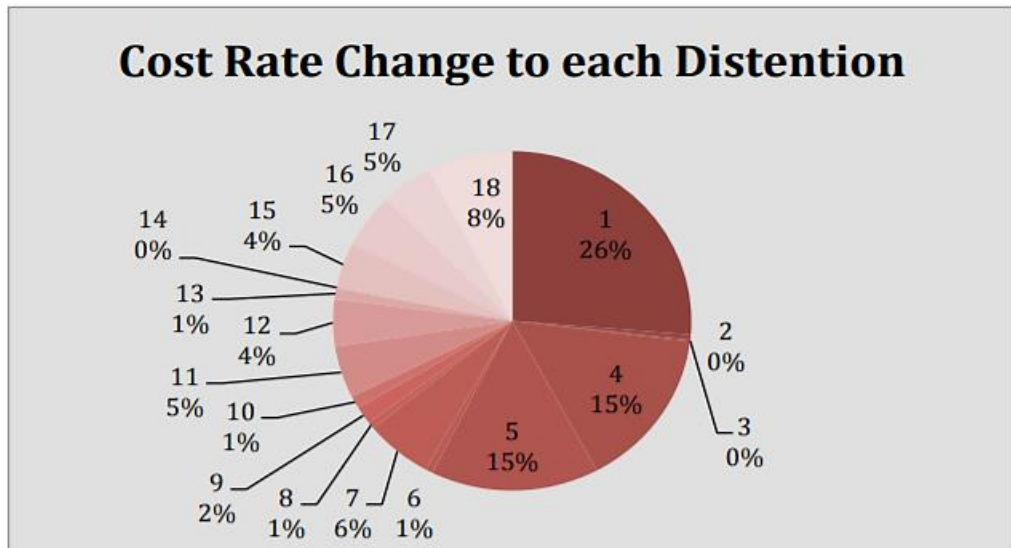
Table 3 was highlighted the productivity in terms of cost embedded in each branch which the numbers were shown with minus to indicate the decrease in transportation costs spend in 2015. The cities such as Riyadh, Khobar, Abha and Arar represented highest number and rates in cost productivity. Figure 1 and 2 represented the result in chart and percentage.

**Table 3:** Rate of Change in Transportation Costs Between Year 2014 And 2015

Cotentant	Number	Destination	Rate change
Central	1	Riyadh	-15094050
	2	Buraidah	-279000
	3	Haail	-85600
Eastern	4	Khobar	-8737600
Southern	5	Abha	-8720400
	6	Beshah	-369600
	7	Jizan	-3504450
	8	Al Baha	-384800
	9	Najran	-953350
Northern	10	Jeddah	-679800
	11	Makkah (Hadah)	-2843100
	12	Taif	-2559600
	13	Medinah	579600
	14	AL Qunfuzah	105000
Western	15	Tabouk	-2422000
	16	Alquryat	-2933550
	17	Aljawf	-2709200
	18	Arar	-4421700



**Figure 1:** Rate of Changes in Transportation Costs Between 2014 And 2015 In Each Branch.



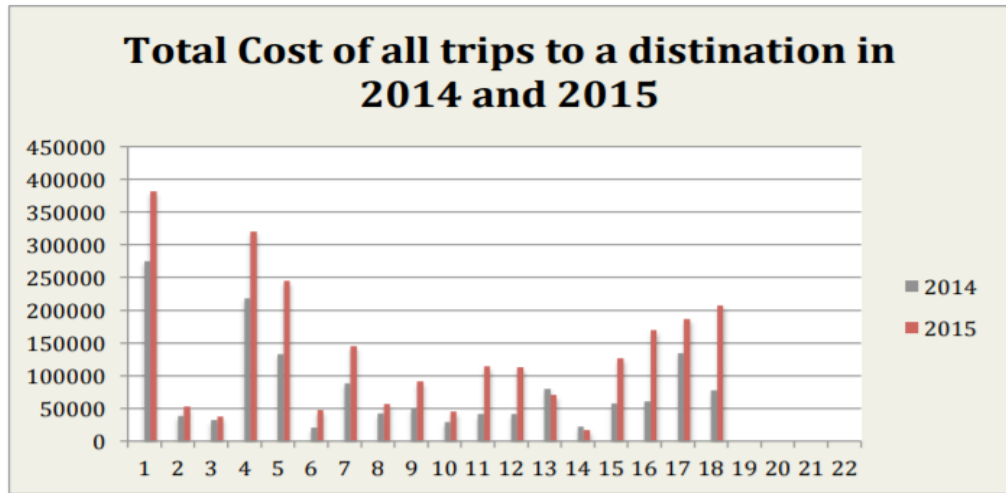
**Figure 2:** Rate of Change In Transportation Costs Between 2015 And 2014 In Each Branch With Percentages.

In Table 4, the results were calculated through multiplied the prices per normal trips, returns, extra days and express deliveries by number of each normal trips, returns, extra days and express deliveries for each destination in both years. There were some cities had contributed in overall cost reduction which saved on 107,050SR in Riyadh deliveries, 130,050SR for Arar deliveries, 111,800SR for Abha deliveries and 108,650SR for Al-Qurayat deliveries. Figure 3 showed comparison of total cost of transportation embedded in 2014 and 2015.

**Table 4:** Total Cost<sup>67</sup>of All Trips to A Destination In 2014 And 2015

Cotentant	Number	Destination	Total cost of all trips in branch 2015	Total cost of all trips in branch 2014
Central	1	Riyadh	274600	381650
	2	Buraidah	38650	52600
	3	Haail	32000	37350
Eastern	4	Khobar	218400	320000
Southern	5	Abha	132750	244550
	6	Beshah	20850	47250
	7	Jizan	88000	145450
	8	Al Baha	42200	57000
	9	Najran	50200	91650
Northern	10	Jeddah	29450	44900
	11	Makkah (Hadah)	41250	114150
	12	Taif	41700	112800
	13	Medinah	79700	70500
	14	Al Qunfuzah	22150	17150
Western	15	Tabouk	57250	126450

16	Alquryat	60900	1695500
17	Aljawf	134400	186500
18	Arar	77200	207250



**Figure 3:** Total Cost of All Trips to A Destination In 2014 And 2015

In this study, total spending on transportation means for tenders in 2014 was 2,426,750SR and 1,441,650SR in 2015 and difference between both years was 985,100SR which considered as savings. There was reduction in cost by 68% that perceived as an increase in performance level. Main factor caused the reduction was absence of express deliveries which costs estimated of 36.900SR in 2014 due to longer time in planning and schedule for their deliveries. Another factor in cost reduction is due to increment of 185% of cost in return trips, 151\$ in extra days for any trip and 56% of normal trips for tender deliveries.

**CONCLUSION**

In conclusions, impact of efficient approaches implementation had positive impact on both business overall profitability and overall operation logistics costs. External and internal factors for changes in transportation means such as nature of the products availability, constant updates in SFDA and customs’ regulation, truck types, KPI adjustment, merge of product delivery and truck contractors. Tamer Group’s logistics had successfully with help of external factors such as product availability had increased performance level to logistics costs by 68%.

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